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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,155	07/11/2000	Dan A. Steinberg	ACT-121	1603

7590 01/28/2002

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EXAMINER

HYEON, HAE M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 01/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,155

Applicant(s)

STEINBERG ET AL.

Examiner

Hae Moon Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the end face of the optical fiber being located within 1 millimeter of the front face must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The side wall 46 described on page 7, line 19. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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4. The drawings are objected to because the reference number for the integrated optic chip is not given. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: On page 8, line 25, "tha optical fiber" should be -- the optical fiber --.

Appropriate correction is required.

6. Claims 15 and 23 are objected to because of the following informalities:

- Claim 15, line 3, change "front portion" to -- bonded front portion-- in order to have the same terminology for the same element consistently through out the specification.
- Claim 23, line 5, "a rear portion" should be -- the rear portion --.

Appropriate correction is required.

Claim Objections - 37 CFR § 1.75(a)

7. The following is a quotation of an appropriate paragraph of 37 CFR 1.75:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention or discovery.

8. Claims 2, 6, 7, 14, 19, 20 are objected under 37 C.F.R. 1.75(a) because the limitations recited in these claims are not described in the present specification.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 1 and 13 recite, “a front face opposite the rear portion.” This statement is indefinite because the rear portion 24 is located on a top side of the V-groove chip 23, but the front face 34 is located on a front side of the V-groove chip 23. The rear portion 24 and the front face 34 are perpendicular to each other, but not opposite to each other. The front portion 26 can be said to be opposite to the rear portion 24.
- Claim 15 recites, “the V-groove chip has a wick stop trench between the rear portion and the front portion.” In view of claim 16, it seems that claim 15 should recite that a wick stop trench is in between the rear portion and the middle portion.

11. Claim 11 recites the limitation “the V-grooves” in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 1 only recites, “a V-groove.”

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

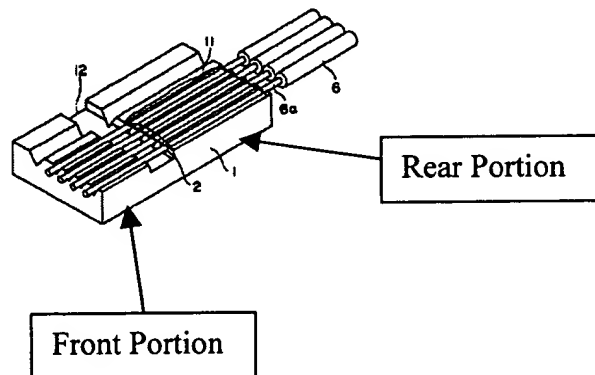
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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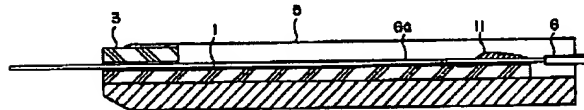
13. Claims 1, 3, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al (JP410227948A).

Yamashita discloses an optical fiber array apparatus comprising a V-groove chip 1 and an optical fiber 6. The V-groove chip 1 has a V-groove 2, a rear portion, a front portion, a front face and a wick stop trench 12. The optical fiber 6 is disposed in the V-groove 2. The optical fiber 6 is not bonded to the front portion of the chip 1, but the optical fiber 6 is bonded (at point B) to the rear portion of the chip 1. The optical fiber is extending from the rear portion. The wick stop trench 12 is in between the rear portion and the front portion.

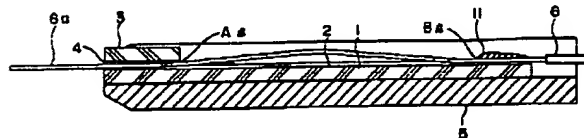
【図4】



【図7】



【図9】



Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al.

Claims 6 and 7 recite a range of dimensions for the front and the rear portions of the chip. Although, Yamashita does not describe specific dimensions for the front and the rear portions of the chip, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the chip taught by Yamashita to have the dimensions taught by the instant invention because the instant invention does not provide any reason or a specific problem to be solved by having claimed dimension. Therefore, it is an obvious design alternative to provide desired dimensions for the front and the rear portions of the chip. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al in view of Yamane et al (5,557,95) or Murphy (4,639,074).

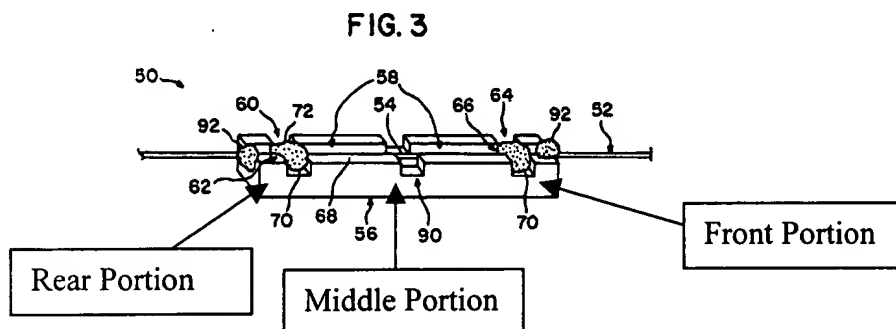
Claim 12 recites that the V-groove in the front portion has a flat bottom surface, but Yamashita does not disclose a flat bottom surface for the V-groove in the front portion.

Yamane discloses an optical fiber apparatus having V-groove 24, 26 or V-groove with a flat bottom surface 14, 16. Murphy also discloses an optical fiber apparatus having V-groove with a flat bottom surface (see Figs. 2-5).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a V-groove with a flat bottom surface because this would provide a stronger substrate compared to a substrate with a V-groove.

17. Claims 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bookbinder et al (5,926,599) in view of Yamane et al (5,557,695).

Bookbinder discloses an optical device comprising a chip 56 having a groove 58, a rear portion, a middle portion, a bonded front portion, and a front face and an optical fiber 52 disposed in the groove 58. The optical fiber 52 is bonded to the rear portion and the bonded front portion of the chip 56, but not bonded to the middle portion of the chip 56. The chip 56 has a wick stop trench between the rear portion and the bonded front portion and between the middle portion and the bonded front portion. The only difference is that the groove 58 is not V-groove.



Yamane discloses an optical device using either U-groove or V-groove. In column 16, lines 56-67, Yamane states that V-groove has better controllability in the vertical direction (depthwise direction) of the optical fiber fixed on the groove 24.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical device taught by Bookbinder such that it would have V-groove as taught by Yamane because the V-groove improves controllability in the vertical direction of an optical fiber fixed on the groove.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

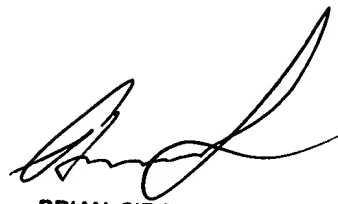
US Patent No 5,297,228 by Yanagawa et al., US Patent No. 5,425,118 by Sugihara et al., US Patent No. 6,103,344 by Ota et al., US Patent No. 6,163,639 by Ollier et al., US Patent No. 6,215,946 B1 by Sherrer, and US Patent No. 6,257,772 B1 by Nakanishi et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae Moon Hyeon whose telephone number is 703-308-4802. The examiner can normally be reached on Mon.-Fri. (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 703-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

hnh hnh
January 24, 2002